

What is claimed is:

1. An electric power steering device for transmitting rotation of a steering assisting electric motor to a steering mechanism through a small gear and a large gear, comprising:

a first member disposed on a rotary shaft of said electric motor;

a second member disposed at one end of the small gear; and

an elastic member interposed between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first elastic modulus corresponding to a case, in which the torsion angle between the first and second members is less than a predetermined angle, and a second elastic modulus corresponding to another case, in which said torsion angle is not less than the predetermined angle, and wherein said first elastic modulus is smaller than said second elastic modulus.

2. The electric power steering device according to Claim 1,

wherein said first and second members have protrusions for meshing in a torque transmittable manner while clamping the elastic member in the rotational

direction of the rotary shaft,

wherein the corresponding protrusions of the first and second members have clamping faces acting as torque transmission faces capable of clamping the elastic member in-between, and

wherein at least either said clamping faces and the clamped faces as the torque transmission faces of the elastic member confronting the former are provided with projections for establishing the first elastic modulus by compressing the elastic member locally when said torsion angle is less than the predetermined angle.

3. The electric power steering device according to Claim 1,

wherein said first and second members have a plurality of projections for meshing in a torque transmittable manner while clamping the elastic member in the rotating direction of the rotary shaft,

wherein said elastic member has a cavity portion, and

wherein the elastic member is compressed to bury the cavity portion substantially when said torsion angle is not less than the predetermined angle.

4. A joint for use in the electric power steering device according to Claim 1, 2 or 3, comprising:

a first member;
a second member; and
an elastic member interposed between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first elastic modulus corresponding to a case, in which the torsion angle between the first and second members is less than a predetermined angle, and a second elastic modulus corresponding to another case, in which said torsion angle is not less than the predetermined angle, and wherein said first elastic modulus is smaller than said second elastic modulus.

5. A joint for use in the electric power steering device for transmitting rotation of a steering assisting electric motor to a steering mechanism through a small gear and a large gear, said joint comprising:

a first member;
a second member; and
an elastic member interposed between the first and second members for transmitting a torque between the two members;

wherein said elastic member has a first elastic modulus corresponding to a case, in which the torsion angle between the first and second members is less than a

predetermined angle, and a second elastic modulus corresponding to another case, in which said torsion angle is not less than the predetermined angle, and wherein said first elastic modulus is smaller than said second elastic modulus.